The MAC Flyer

FEBRUARY 1977

Pride Goeth Before The Fall. Page 3.

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The MAC Flyer

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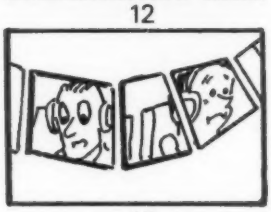

16

20

Pride Goeth Before the Fall 3

Pointing Out The Hazards 7

Communication Bypassing May Prove Fatal 10

The Trial of Adam Slocum 12

Flying in the Big Apple 16

Physiological Merry-Go-Round 20

A Pilot With a Small Foot 22

Challenge From Charleston 24

C. R. Terror 25

Quick Stoppers 28

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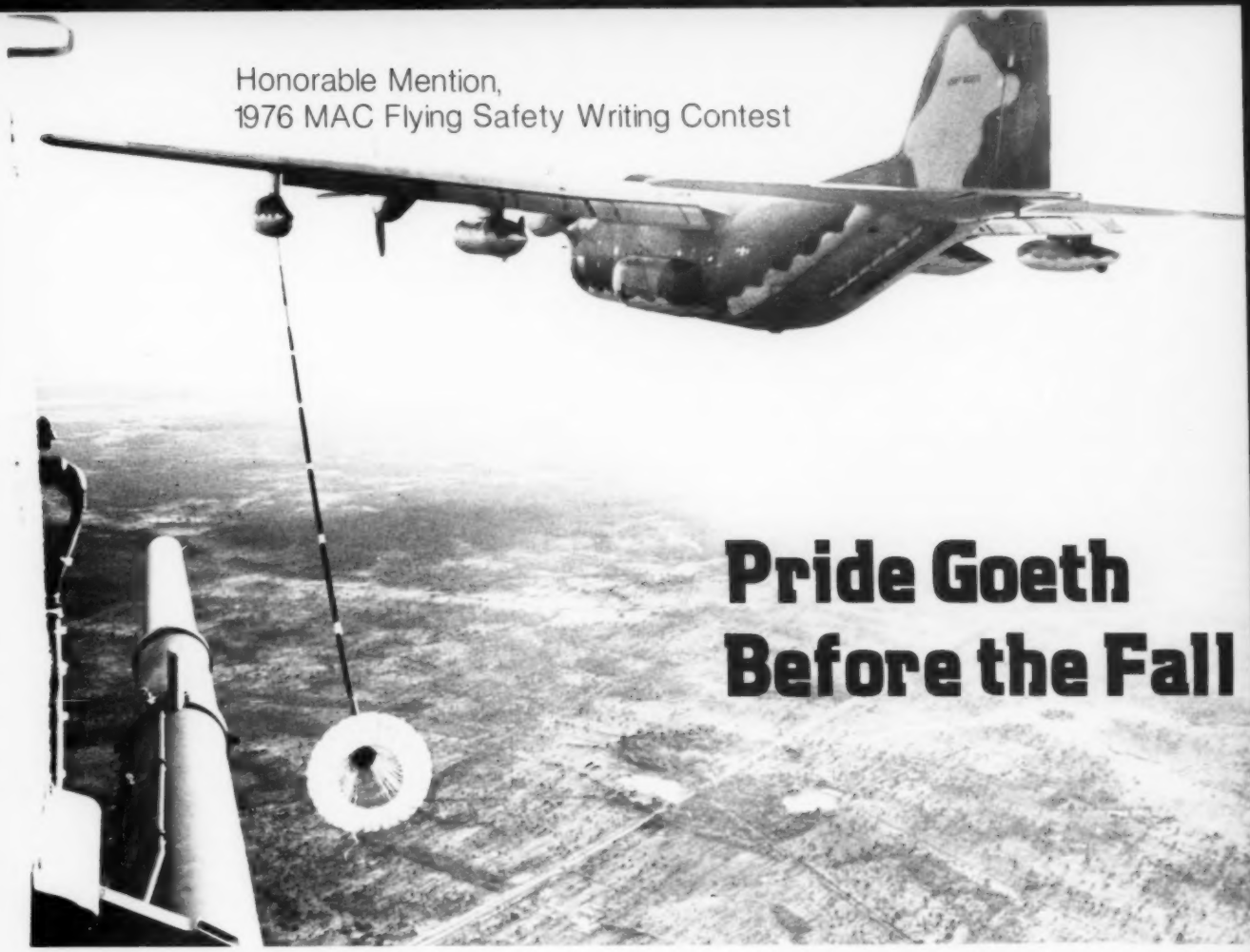


Pride Goeth Before the Fall

by Maj Norman G. Golden
1551 FTS
Kirtland AFB, New Mexico

"Of all the causes which conspire to blind

Man's erring judgment, and misguide the mind,

What the weak head with strongest bias rules,

Is pride, the never-failing vice of fools."

—Alexander Pope

Around, around, down and around. The Hercules shuddered and shook as it spiraled toward the ground 2,000 feet below. For the crew inside, the next 30 seconds would be an eternity. The IP struggled at the controls.

"Damn! damn! damn! You can't do this to me," he was saying. "I can handle anything. C'mon, baby." As he cursed and struggled to regain control, Mike's desperate efforts triggered a mental impulse which scanned deeply for a solution to his problem. There was a cause for what was happening. That much he knew. He would never determine that cause, but there were those who would—who,

in fact, already had.

•

"Dammit, Lieutenant, what are you trying to prove!" Major Jones yelled at Mike. The old IP grabbed number one throttle and held it in place. It was Mike's first instructor upgrade ride. "You'd better get with your homework—you just negated any form of instruction with that trick!"

"Come on, Major Jones," Mike grinned. "I caught you with your pants down. Why, if—"

"Yes, Sonny, you caught me," the major interrupted. "It's easy—just divert my attention and yank one of those throttles back. That'd catch the best of the pilots, let alone the students. But I don't think you understand. You're training to be an instructor—you should be imparting instruction, not scaring hell out of your student and the crew."

The major trimmed the aircraft and reached down to the bag at the side of his seat. He withdrew a manual and tossed it in the lieutenant's lap. "That's the MACSUP to 60-16. See what it says about simulated emergencies—'reasonable and applicable,' I think the wording is. And while you're at it, check the verses on the 'surprise approach.' As an IP, you've got to temper your action to allow for a possible wrong reaction or mistake by your student. It just might be possible to get this hummer into a situation that no pilot, even one as sierra hotel as you think you are, could ever recover from . . ."

Mike sighed, but the major continued. "Another thing—when you simulate an engine failure, pull the throttle back *slowly*. And never hook your finger under the throttle like you did—you're applying upforce on the throttle and you could bring it over the gate and into the ground idle range. Always retard the throttle by putting your hand on *top* of the knob."

Good grief, Mike thought, he's really touchy today.

•

Around and around.

And then there was Captain Smith. When Mike first met him, he pegged the captain as a daredevil type, sure to enjoy a bit of aerial one-upsmanship. He had that air about him. But Mike was soon to learn the daredevil captain was a "marshmallow" in the air.

"No, no, no," the captain said wearily. "You *don't* give a simulated engine failure at minimum operational speed."

"But you've got to check a student's ability to rapidly and accurately assess the situation," Mike said.

"Super," Captain Smith responded. "But just suppose your second balloon student comes unglued or you encounter another problem. Stick with the Dash One and use higher airspeeds in the refueling range to demonstrate control problems. You know there's a warning item about 'abrupt power reduction' while all the garbage is hanging. At the lower airspeeds, you could get immediate stall without any preliminary indications."

"Oh, any pilot worth his salt—"

"And what about the extended refueling hoses?" the captain continued. "Suppose your trickery is compounded with a single hose extended on the same side as your simulated problem—now your problem is no longer simulated. And your student might just jump in with a lot of rudder. What's the rotorhead behind you going to do?"

Mike said nothing but shook his head imperceptibly.

"Now let's find that chopper and try it again," Captain Smith peered out the window. "And this time, how about making the proper call? You remember it, don't you? Breakaway, breakaway, breakaway?"

"Yes, Sir," Mike responded and in defiance cobbed the throttles, banked the aircraft 45 degrees, and veered left like an avenger, again seeking the now distant helicopter.

•

Around and down.

The certification board was proceeding routinely. The old

man's troops were seated around the big oak desk. Somebody began talking.

"Lieutenant Mike Posit? Sure, he's a good stick. One of the best we've seen assigned to the school. But—"

"But what, Major? Has he been recommended or not?" the commander asked icily. "We're here to certify a new instructor. If you've got a point, make it." He surveyed his assembled staff.

Capt Bruce Babcock, the organization's training officer, squirmed a little and bit his lip. The staff exchanged glances. And finally, Maj Chris Elnire, the standboard pilot, spoke up. "Well, Sir," he cleared his throat, "all I can say is that Mike flew an outstanding flight evaluation for me. Everything, tactical deliveries, aerial refueling, and landings, were as good as I've seen. Engine out, no flappers, and short field problems didn't bother him. The kid's really got his stuff together."

Bruce squirmed again. Sure, he had it together, Major. You should have heard him in the stag bar after your check ride—he called you a real "Santa Claus." Did you check his manuals for currency? How about his knowledge of the regs? If only you weren't my rating official, I'd spill the beans. Man, if the commander only knew, he'd have us all . . .

Bruce's thoughts were interrupted as the commander turned to him. "How about training shop? Anything from your department? You guys usually have something to say."

"Well, Sir," Bruce studied the sage behind the desk who was glancing not too inconspicuously at the clock on the wall. Almost lunchtime, he must have been thinking. "I, ah—no, Sir. Training has nothing. He's an aggressive kid, but I guess we all were. I'm sure, when he gets a few students behind him, he'll be one of our best." Did I just say that, Bruce asked himself, almost out loud.

"Well, that's it then. Let's get the young man in here." The commander turned to his ops type. "I assume you'll waste no time putting this new resource to work."

"He'll be flying tomorrow, Sir."

•

Around and around and down.

Mike arrived at the briefing and found only one student. The other had flown the previous night and was still enjoying the sanctuary of crew rest.

"No sweat," Mike told the young brown-bar. "We'll take you through the paces in the local area for a couple of hours. Then land and pick up the second pigeon—er, pilot." Mike smiled. Damn! This is great! Mike Posit, Instructor Pilot. I'll show those rascals how to train students.

Spurred by the approaching takeoff time, the crew filed the flight plan. The crew transfer was a hurried, disorganized one.

"Everybody ready?" Mike shouted on interphone. "Here we go!" He signaled the student to push 'em up.

After takeoff, the engineer mentioned that the 781 had not been signed off by the first period aircraft commander. Minutes later, the loadmaster called, "Hey, pilot, do you want to sign this Form F now, or shall I keep it for you until the mission's complete?"

"Give it to me and I'll sign it now," Mike retorted, as his student skidded around the turn from downwind to base leg. "You can pass it to the SOF when we land in ten minutes. He'll be bringing my next victim—er, student, out then."

Some people have to be told to do everything, Mike thought. Funny how some seemed to be clairvoyant and others totally dense. Take this student engineer for example. Why he'll have a malfunction analyzed and corrected long before most pilots know that anything is wrong. Yes, I like men who know their jobs and show initiative—you can trust them to keep you out of trouble.

Mike's reverie was finally

broken by tower crackling ". . . three thousand feet remaining, turn right next taxiway if possible. Flight of two F-4's on short final."

Rolling a bit fast, the Hercules hopped and skidded as it turned off the runway and stopped abruptly adjacent to the idling and unattended SOF vehicle. The crew door popped open and a hand reached out with the Form F. The SOF grabbed the forms and waved the student on. A rakish looking first lieutenant clambered up the ladder to the flight deck.

"Hi, Sport," he shouted as he settled into the left seat. "Noticed your arrival. You must have new booties—kinda heavy on the brakes." A quick nose-hose check hid his flaming red mustache for a few seconds.

"Hello, yourself, you arrogant toad," Mike snapped. "Get your butt strapped in and we'll see if you can fly as well as you can mouth."

And so it went. Malfunction by Mike and counter by student. One-upsmanship was the order of the day.

Finally the chopper was contacted and the rendezvous and join-up executed flawlessly, much to Mike's chagrin.

"Okay, sport, let's see if you can handle this one," Mike mumbled hurriedly, hooking a finger under number one throttle and jerking it back. "Flameout on number one," he announced matter-of-factly.

The student engineer, engrossed in a systems discussion with his instructor, heard the call and immediately began retracting the refueling drogue. Mike had not used the word "simulated."

As the right hose sped toward the stowed position, a hydraulic line ruptured in the left refueling pod and that drogue began extending to the full trail position. The student pilot responded to the yaw situation with vigorous right rudder, attempting to center the needle and ball.

Mike, startled by the engineer's action, looked up at the overhead panel while ever so slightly raising his left hand, still on the number one throttle. Up, up, just enough to clear the gate and bring the throttle into ground idle range.

Behind the C-130, the IP in the helicopter was having his problems too. His student was the cautious type and was having problems hooking up.

"Come on! Come on! You've got to increase your rate of closure!" the IP shouted. "Here, let me show you." With that the IP added power and took a bead on the drogue and closed in rapidly.

Suddenly, his frame of reference changed as the C-130 yawed violently.

"What the hell! Look out—" the helicopter mechanic shouted as the main rotor contacted the floundering Hercules.

The huge aircraft balked and strained under this unusual treatment. Flaps 70 percent, hose extended, airspeed at minimum operating—the Hercules could cope with these things, as it had for so many instructors and students in the past. But the inadvertent movement of the throttle into the ground idle range and the assault by a once friendly comrade had been too much.

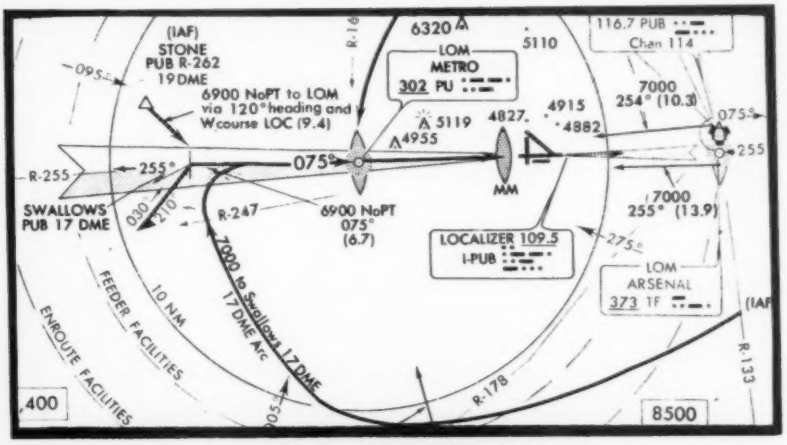
Around and down and around.

The Hercules shuddered and shook in a downward spiral. My God, what did I do wrong? Mike almost cried aloud. He hadn't the courage to look into the eyes of his horrified student as the ground spun up to meet him.

ABOUT THE AUTHOR

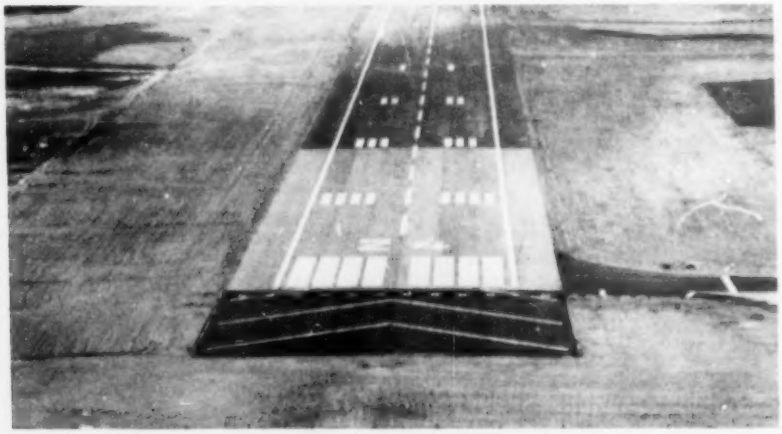
Major Golden graduated from the De La Salle Military Academy in Kansas City, Missouri, in 1954. After spending three years in the Marine Corps, he completed his BA in English at St. Mary's College, Winona, Minnesota and was commissioned via OTS in 1962. Major Golden has flown nearly 7,000 hours in the T-33, T-37, C-54, C-124, and C-130. His last five assignments have been with the Aerospace Rescue and Recovery Service. He has been with the 1551 FTS since June 1974 and is currently the HC-130 Flight Commander.

What are some of the *real* day-to-day problems that pilots face? A report by six retired airline pilots focuses on the hazardous conditions in today's flight environment.



Cluttered approach plates draw criticism.

This type of altimeter may be forbidden in some aircraft.



Physical characteristics make some airports hazardous.

Pointing Out the Hazards

Following the crash of a commercial airliner near Dulles International in December 1974, the Federal Aviation Administration appointed the Special Air Safety Advisory Group (SASAG) to conduct an independent evaluation of air carrier operations. The group was composed of six highly experienced, recently retired airline captains; its job was essentially to point out the hazards in our national air transportation system and to make recommendations for improving flight safety.

The captains spent four months in their investigation, flying as observers on 600 trips and interviewing nearly 1,000 pilots. The report was released in February 1976.

The SASAG report represents the "foresight" approach to safety—an effort to cure a hazardous condition before it leads to an accident. For those who are accustomed to extensive reading of accident reports and "after the fact" safety recommendations, this is a refreshing change. Although the SASAG has no official connection with MAC or USAF, many of its

observations and recommendations apply to the conditions MAC crews frequently encounter.

Some of the Conclusions

Aircraft are intrinsically safer, approach aids more sophisticated, and the air traffic control system better able to deal with its increasingly complex task than ever before. But one key element of the system remains essentially the same: the human who operates the aircraft.

The group recognized that an increasingly complex system makes increasing demands upon this human factor and that changes to the system intended to promote safety can inadvertently make those demands greater still. Therefore, the thrust of their investigation was directed toward reducing the demands on the human to help him perform safely.

Danger by Design

The report cited several airports which had either procedures or physical characteristics that were hazardous. For example, obstacles such as ditches near the end of a runway could turn a slightly short landing into a major disaster. The group recommended an immediate study of such airports and either raising minimums there or closing the runways until such hazards could be eliminated.

Another designed-in danger identified during the study was the use of three-pointer altimeters. Misreading of this type altimeter nearly caused two aircraft to descend into the ground and another to cruise for its entire flight at FL 190 rather than the assigned altitude of FL 290. The group recommended that the FAA forbid use of this type of altimeter in large turbine-powered aircraft. The FAA concurred, and the three-pointer altimeter may soon be banned from aircraft of this type.

A Fresh Look at Fatigue

Also noted were the improper use of checklists and other violations of cockpit discipline which were called "a clear and direct result of fatigue." The group also stated that crews were frequently scheduled to the limits allowed by law, with consideration given to economy but none to safety. As a result of this finding and SASAG's recommendation, the FAA intends to review the entire subject of flight and duty time limitations.

Who's in Charge Here?

One of the knottiest problems faced by the group was the relationship between pilots and air traffic controllers. Their report was sharply critical of the air traffic control system. It alleged that the constantly increasing pressure to expedite air traffic forces controllers to usurp the pilot's authority and the resulting conflict produces emotional responses which cannot be tolerated. Although the pilot is and must remain responsible for such vital matters as terrain clearance and severe weather avoidance, SASAG felt that some of this responsibility had been abdicated to ATC—with fatal accidents as the result. Other areas where SASAG objected to overcontrol by ATC included low altitude speed-up and slow-down requests, altitude restrictions requiring high descent rates close to the runway, and excessive vectoring at low altitudes.

Not all of the group's recommendations in this area were accepted without reservation by the FAA. Changes which could result from the study include tighter policing of ATC procedures and improved charts to help pilots in terrain avoidance while being radar vectored.

The Crowded Cockpit

Distractions in the cockpit during the approach and landing phases of flight were identified by SASAG as a particularly hazardous condition. The group recommended that conversation and non-operational activity in the cockpit be held to an absolute minimum—a policy already adopted by some airlines as well as by MAC. In addition, they identified two major

sources of distraction at such times: excessive communication and cluttered approach plates and charts.

The group held that the necessity to maintain communication with ATC frequently removed the copilot from his function as a primary crewmember and made it impossible for him to properly monitor the approach. They recommended that ATC communications be prohibited between the outer marker and touchdown. The FAA concurred in part with this recommendation; ATC procedures already require that transmissions to an aircraft at such times be held to a minimum. However, the FAA emphasized that some transmissions may be essential to safety; sudden wind or visibility changes and previously unannounced traffic were cited as examples.

Another criticism was that approach plates were cluttered with needless and difficult-to-read material, that essential information such as minimum vector altitudes were not included, and that many procedures themselves were excessively cumbersome and complex. Recommendations in this area were concentrated on simplification (such as depicting missed approach procedures graphically rather than in text form), utilizing pilot input during approach procedure design, and minimum vector altitude information on approach charts.

Again, the FAA concurred with many of these recommendations. Work is already underway on revision of charts and approach plates, and some SASAG suggestions will be incorporated in the effort.

Down the Chute

SASAG found that the number one shortcoming in the approach and landing phase of flight was a lack of visual vertical guidance outside the cockpit. The transition from instrument to visual flight is difficult and hazardous; low visibility and illusions compound the problem. Add wind shear to the equation, and an accident becomes even more probable.

Several of SASAG's recommendations were aimed at reducing the hazards of approach and landing. They recommended that visual guidance systems such as VASI or the Douglas "pulse light" (a compact, portable visual vertical guidance system) be installed on all runways as soon as possible. Another recommendation was to install DME at all airports served by a nonprecision approach, with the final approach fix located so as to provide a descent angle of no more than three degrees to the runway threshold.

Wind shear got its share of attention from the group. Northwest Airlines is currently using a system for plotting turbulence and wind shear and for disseminating this information to its crews. SASAG recommended that a similar system be adopted by all air carriers, and FAA is developing a regulatory project along those lines.

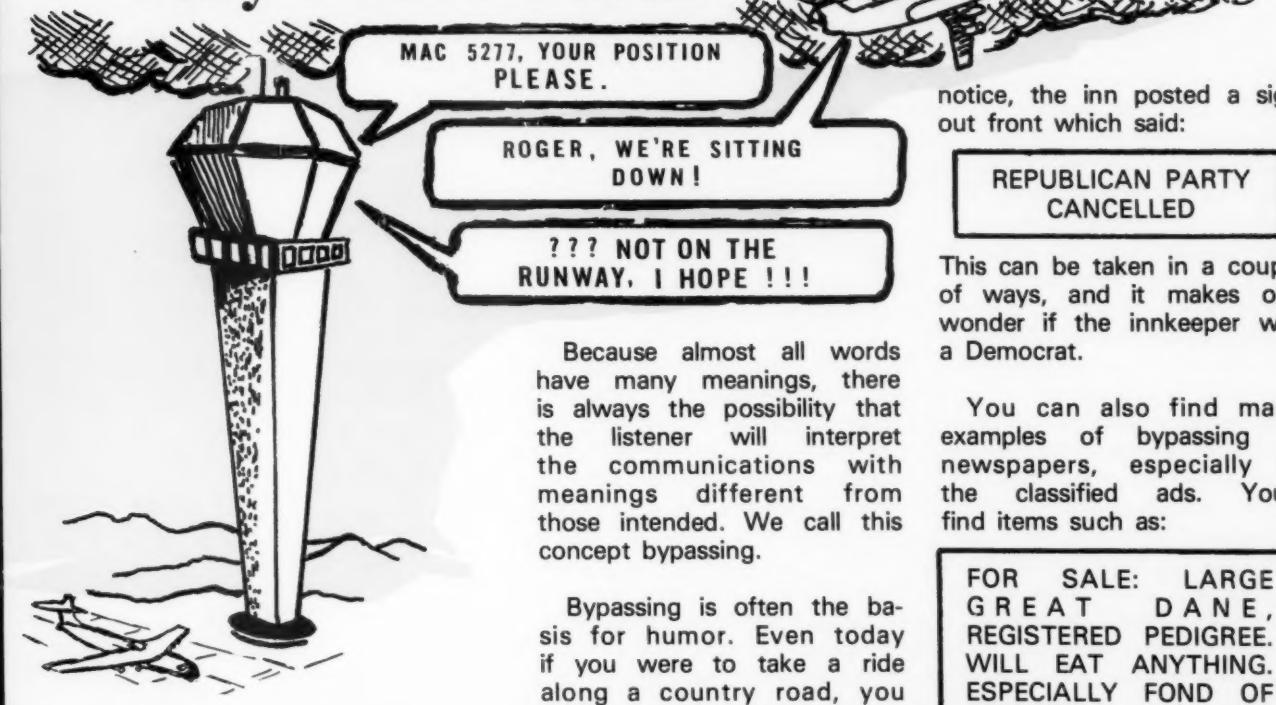
Another of the group's recommendations for dealing with wind shear as well as the overall problem of maintaining a stable and accurate final approach path was the accelerated development of heads-up display (HUD) for air carrier aircraft. HUD is now used in military fighter aircraft and is capable of providing flight path angle information to the pilot as he looks through the windshield.

Looking Ahead

It will be some time before the final results of the study become evident; although some recommendations are already being acted upon, others will require a considerable outlay of time and money, and some may never be acted upon at all. But it seems likely that the study will achieve the basic purpose for which it was intended: to make flight safer for all.

Editor's note: This article was adapted from "Pilots Tell How To Make Flight Safer," a series of four articles which appeared in the April through July 1976 issues of Flight Operations magazine.

Communication Bypassing May Prove Fatal



On December 1, 1975, a ground controller radioed Flight 514 that it was "cleared for approach." The pilot acknowledged him and, according to the usual procedure, immediately began his descent to 1,800 feet. To the controller, "cleared for approach" meant the pilot could begin his descent when it was safe and, in this case, when he had passed the mountains. To the pilot, it meant that it was safe to descend, although he apparently had some doubt. There are two different meanings for the phrase "cleared for approach." One meaning was used by controllers, and the other meaning was used by pilots.

Because almost all words have many meanings, there is always the possibility that the listener will interpret the communications with meanings different from those intended. We call this concept bypassing.

Bypassing is often the basis for humor. Even today if you were to take a ride along a country road, you might come across a sign over a gas station and restaurant that looks like this:

> EAT HERE
> AND
> GET GAS

Perhaps we can't be sure whether the owner is trying to tell us about the convenience of his business, or whether he is giving us fair warning about his food, but chances are that he sees only one meaning.

Not long ago, the Republican Party was to hold a brunch at a local inn. The brunch was cancelled because of bad weather. In order to forewarn anyone who may not have received the cancellation notice, the inn posted a sign out front which said:

> REPUBLICAN PARTY
> CANCELLED

This can be taken in a couple of ways, and it makes one wonder if the innkeeper was a Democrat.

You can also find many examples of bypassing in newspapers, especially in the classified ads. You'll find items such as:

> FOR SALE: LARGE GREAT DANE, REGISTERED PEDIGREE. WILL EAT ANYTHING. ESPECIALLY FOND OF CHILDREN.

How about this example from a federal bulletin board:

> THOSE DEPARTMENT HEADS WHO DO NOT HAVE THE SERVICES OF A FULL TIME SECRETARY MAY TAKE ADVANTAGE OF THE STENOGRAPHERS IN THE SECRETARIAL POOL.

Who could surpass Groucho Marx in being able to use bypassing in humor? Consider the statement made to an airline stewardess who told him it would be all right to smoke his cigar if he didn't annoy the ladies. He replied, "I didn't realize there was

a choice. In that case, I'll annoy the ladies."

Any time we communicate, we can be misunderstood when the recipient of our communication doesn't interpret our communication with the meanings we intend. In its mildest form, bypassing can be humorous. In industrial communications it occurs with more serious impact. It can be the basis for false starts, wasted manhours, and wasted money. The fact that bypassing has occurred can be recognized by statements such as, "Oh! I didn't see it that way" or "Is that what you meant?"

Bypassing can also have tragic consequences, such as when pilots and controllers bypass one another. William J. Coughlin, in a Harper magazine article many years ago, pointed out evidence which showed that the Japanese bypassed on a word in the Potsdam Ultimatum which resulted in the dropping of the atomic bomb and the declaration of war by Russia on Japan.

But what can we do about it? The answer is that we must learn to communicate in a different way. We must not hide behind words and phrases and then hope that the other person understands. We must think about him, and we must try to see things from his viewpoint. To do this, we have to ask him questions. We need to paraphrase what we've heard. In short, we must constantly try to anticipate bypassing.

Let's go back to Flight 514. When the controller told Flight 514 that he was cleared for approach, he could have been thinking about the pilot's situation, since the weather was bad and the visibility was zero. He might have empathized with the pilot and said something like, "You're cleared for your approach, but be careful because there are mountains out there." Had he said something like that, do you think the pilot's next action would have been to descend immediately?

On the other hand, what if the pilot, after he had received his clearance, had said, "Okay! I'm descending to 1,800 feet right now." Perhaps, the controller would have had a response.

During testimony before the National Transportation Safety Board, both pilots and controllers testified that they had different interpretations of what the clearance meant. Pilots stated that they felt that the clearance gives them permission to descend to lower altitudes because the ground controller is saying, in effect, that there are no obstructions in the way. Controllers disagree and, supported by the FAA, they say that it is up to the pilot to keep the airplane at a safe altitude. The controller who was to bring the flight in stated that he thought the clearance was understood. In effect, he assumed that the pilot would use the same interpretation that he had in mind.

We all need to be approachable. This means that we must be willing to talk and explain what we mean. Many times it is better to say something that we think is obvious, rather than making an assumption and waiting for the other guy to ask a question. Can we afford to be approachable? Probably most pilots feel that they have too much to do to spend time talking about something they "know." Certainly, the controllers are busy also. Yet, it seems probable that if either man had spent just a little time, perhaps just a few words . . . things might be different today for 92 people.

The solution to bypassing seems deceptively simple, that is, to talk a little more. But this is not a simple solution. The solution to the problem of bypassing requires a change in attitude on the part of everybody who wants to communicate effectively and accurately. It requires us to actively make sure that we understand and are understood. It requires us to explain more, and it requires us to shake off the attitude that what we say will be understood because we've said it "clearly." As listeners, we have to make a serious effort to understand, and not be content with a simple repetition, or perhaps a glib "Roger." It requires us to be patient and careful, and it requires us to be considerate. When we've learned to do this, we've solved one, and unfortunately only one, of the problems of communications.

—CAL *Golden Contrails*

The Trial of Adam

"You are accused of professional incompetence in that you failed to prevent said crash. How do you plead?"

The angry murmurs of the crowd in the packed courtroom gradually died under the insistent rapping of the heavy gavel. When the judge was satisfied that order prevailed he picked up the long sheet of paper and addressed the figure standing rigidly before him.

"Captain Adam Slocum, you are charged with the death of 44 men, women, and children and aggravated assault on 22 others, all of whom were passengers or crewmen on the aircraft piloted by you on the night of 13 July, last. Said aircraft crashed on takeoff, resulting in the aforesaid fatalities and injuries. You are accused of professional incompetence in that you failed to prevent said crash. How do you plead?"

The slim, erect figure continued to regard the judge with calm dignity but his clear, blue eyes belied his inner torment. He spoke almost inaudibly, so that spectators in the rear of the room strained to catch the words:

"Not guilty."

Immediately the angry murmurs arose again, swelling around the lone man in front of the bench. Again the judge pounded for order. When at last it came he instructed the prosecutor to proceed.

Throughout the painful hours that followed, Adam was forced to relive those

Slocum

three terror-filled minutes of the preceding July evening—three minutes which had forever altered 67 lives. He heard the prosecutor picture him as a willful, arrogant, cold-blooded killer. He saw a parade of witnesses testify, each in turn casting disgusted, hateful looks at him from the witness chair as they mouthed their half-truths and distorted facts. Finally his turn came. The prosecution had concluded its case.

The shaggy-haired, bespectacled old man who rose from the defense counsel's table looked and behaved like a modern Clarence Darrow. His name was Terrence Harrow, and the similarity did not end there. He, like the famous lawyer of the Twenties, was an avid defender of important causes, a seeker of Truth and a fervent defender of Justice.

He looked slowly around the courtroom, peering over his old-fashioned bifocals at the judge, jury, spectators, and reporters. Gently, almost apologetically, he spoke:

"Ladies and gentlemen of the jury, you have heard the prosecution attempt to show that the defendant caused the loss of 44 souls and injured 22 others as a result of his gross negligence while in command of an aircraft. Now, ladies and gentlemen, the defense submits that the prosecution doesn't know the first thing about the causes of aircraft accidents. We intend to show that accidents are caused by a lengthy chain of circumstances, not just a single isolated factor; and that like all chains, this one consists of many links, any one of which, had it been removed, would have broken the chain and prevented this accident. We will also prove that these links included many other people with responsibilities every bit as important and binding as Captain Slocum's. We will show you a picture of pressure built up around Captain Slocum which coerced him to override his normally good judgment. We will show you that Captain Slocum's actions on the night of the accident were the by-product of a system of command and control which had failed to command or to control. Our first witness will be Lieutenant Colonel Wilford Bush!"

Harrow's first questions were spoken softly, courteously. He established that Lieutenant Colonel Bush had been commander of the 66th Military Airlift Squadron during the period when Adam had reported for his first Air Force assignment as a second lieutenant six years ago. He gently extracted the information that Colonel Bush had never, in the two years he was commander, spoken to the then Lieutenant Slocum about anything except to say "Good morning" or some such trivia. He had never counseled the lad nor had he ever taken any apparent interest in his progress either as an officer or as a pilot. It soon became apparent that Colonel Bush had remarkably little knowledge of Lieutenant Slocum. Twice he referred to Adam as "Yokum" and once as "Holcum." He was dismissed.

The next witness was Major George Smythe. He, too, had been in the 66th with Adam. He had been the chief of aircrew standardization and had given Adam his dollar ride as well as several subsequent checkrides. After establishing these facts Harrow asked:

"Now, then, Major, how did Captain Slocum measure up on these flights? Did he complete all the required maneuvers in the specified manner?"

"Well, yes, I think so," he replied.

"You think so, do you?" Harrow countered. "What about these remarks on his last two Form 4's which say he was, quote, a little rusty unquote, on control of his airspeed during takeoff?" Harrow brandished the forms in Smythe's face. "Did you see that he got extra training on this item to cure the alleged weakness?"

"I, uh, er, well, you see . . ."

"Just answer the question, please. A simple yes or no will do."

"No, I did not. He was O.K.

in everything else and . . ."

"That will be all, Major. You may step down."

Another major took the witness stand. This one was Samuel Gorski, Command Post OIC. The foxy old barrister led Gorski carefully through the events which had transpired in the Command Post on the night of the disaster. Under Harrow's penetrating examination he admitted that he knew the weather forecast for Adam's departure time included intermittent heavy rain, turbulence, and lightning. Adam had been reluctant to clear under those conditions, he admitted, but Gorski had talked him out of delaying the flight because the wing's delay rate was already too high and the "old man" would be furious. He was a very shaken man when he was finally allowed to step down.

Colonel Ben Johnson was the next victim of Harrow's tactics. He was, he said, commander of the 444th Military Airlift Wing, parent unit of Adam's squadron and the Wing Command Post.

"Now, Colonel, would you please tell the jury what your flying safety policy was at the time of this crash last July?" He backed against the defense table, folded his arms and waited expectantly.

Slowly and deliberately the dignified, graying officer phrased his words.

"Our policy was, and still is, safety first. We follow this policy to the letter."

"Your Honor," Harrow addressed the bench, "the defense would like to introduce as defense exhibit D this letter, signed by Colonel Ben F. Johnson in his official capacity as wing commander. It is dated last June 30th and its subject is 'Excessive Mission Delays.' It is addressed to all units within the wing, including the 66th Military Airlift Squadron and the Wing Command Post."

The judge perused the letter quickly, then nodded his head to signify that it could be entered in evidence.

"Colonel Johnson, would you be so good as to read this letter to the jury?" Harrow asked, as he handed the missive to the witness.

The Colonel's hand shook ever so slightly as he began to read. It was a long letter, full of military jargon and replete with strong phrases, such as "It is imperative that our delay rate be reduced" and "Further laxity in this area will not be condoned" and so on. It did not mention safety once. The Colonel, too, had now begun to sweat a bit. When he had finished reading, Harrow resumed:

"Now, Colonel, will you tell us what effect you expected this letter to have on its recipients?"

"Well, of course, I expected to see some improvement in our delay rate."

"Yes," agreed the lawyer. "But isn't it possible that the people who read this letter interpreted it to mean that you wanted the delay situation improved *at all costs?*"

"Certainly not," barked Johnson. "As I told you before, our policy is safety first! I certainly didn't expect anyone to go out and wreck an airplane just to make a takeoff time good!"

"Oh?" asked Harrow as he turned his back on the witness and smiled at the jurors. "No more questions, Colonel."

For the next two hours the parade of witnesses continued. A weather forecaster admitted that a late advisory, warning of severe thunderstorms in the airfield area, was not delivered to the operations center until after Adam's plane had blocked out. Major Gorski was recalled to testify that this advisory was not relayed to Adam prior to his takeoff.

Adam's copilot told of the ill-fated flight in a weak, still shaky voice. He said that there had been severe up and down drafts just after takeoff, that he had failed to

monitor the flight instruments and advise Adam of any unsafe indications, that he had been so scared that he thought he might have retracted the flaps instead of the gear, and that it had been his first flight as a second pilot on a transport mission.

A flight surgeon testified that almost all the fatalities and injuries resulted from failure of the passenger seat floor fittings. He was followed by a traffic officer who admitted awareness of seat tiedown deficiencies but ignorance of any action to have them corrected.

When the defense had concluded, the lantern-jawed prosecutor took the floor for his summation.

"We have," he told the jury, in a voice heavy with sarcasm, "heard the wildest conglomeration of nonsense ever spoken in a court of law. The defense contends that Captain Adam Slocum was an innocent victim of circumstances—that a lot of people who were nowhere near him on the night of July 13th actually are to blame for this disaster. Well, nothing could be farther from the truth! Adam Slocum had the authority to refuse this flight if it didn't appear to be safe. He was in command of the aircraft and he is responsible for its crash."

He continued in this vein for 15 minutes before winding up with a fervent plea for a verdict of "Guilty!"

Terrence Harrow arose slowly.

"Ladies and gentlemen of the jury," he began, "the defense has shown that the defendant was only the final link in a long chain of guilt that stretches all the way back to Adam Slocum's days as a pilot trainee. His weakness in airspeed control was evident then and was fostered and abetted by every instructor and flight examiner who flew with him since that time. His feeling of insecurity began when he was treated so coldly and indifferently by his first squadron commander, and was strengthened by his present commander's apparent lack of understanding of his recent domestic problems. It was this insecurity which caused Adam Slocum to succumb to the pressure for on-time departures supplied by the wing commander and transmitted to him through the Command Post.

"Once the decision to depart had been made, however, there was still a chance for success, but this vanished when a green copilot, inadequately trained and prematurely assigned to a transport mission, retracted the wing flaps instead of the landing gear.

"From that point on, it was a miracle that the aircraft was landed as well as it was. In fact, if the passenger seats had not failed, everyone might have survived. The facts show quite clearly that, rather than being tried, Captain Adam Slocum should probably receive a commendation for saving the lives of the 22 survivors. Remember, ladies and gentlemen, that any one of the witnesses you have heard for the defense could have prevented this accident by breaking the chain of circumstances which preceded it! Your course of action now seems crystal clear. You must find the defendant not guilty."

Less than an hour later the jurors returned to their seats in the jury box. The foreman, with a piece of paper in his hand, stood and glanced at the judge.

The courtroom was quiet now. Beads of perspiration stood out on the forehead of each witness. Captain Slocum was quite pale.

"The defendant will now rise," the judge directed in a solemn voice.

The captain rose slowly, bracing himself with one hand on the table.

The judge looked directly at the foreman. "What is your verdict?"

What would yours have been?

If flying into some of the world's busiest airports ma... not alone. But it doesn't ...

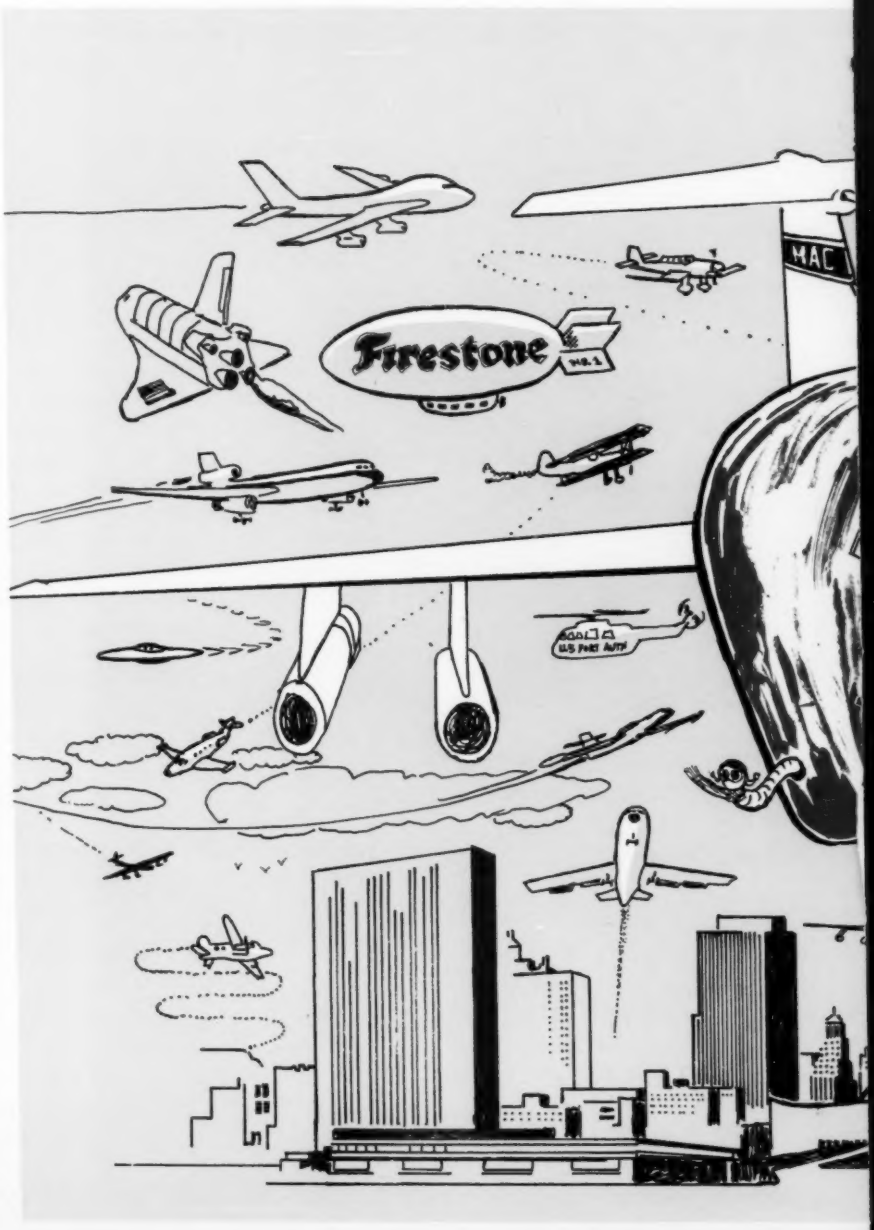
Flying in th...

by Capt Don Miller
11 AAS
Scott AFB, Illinois

MAC pilots get little exposure to larger civilian fields in the United States, such as JFK, O'Hare, Boston, or Logan. But occasionally the MAC mission does require flights into these heavily congested areas. What can an aircraft commander do when he's scheduled into one of these airports for the first time? Here are a few tips that could make your trip into the busier airports a lot more enjoyable, a little less traumatic, and a lot safer.

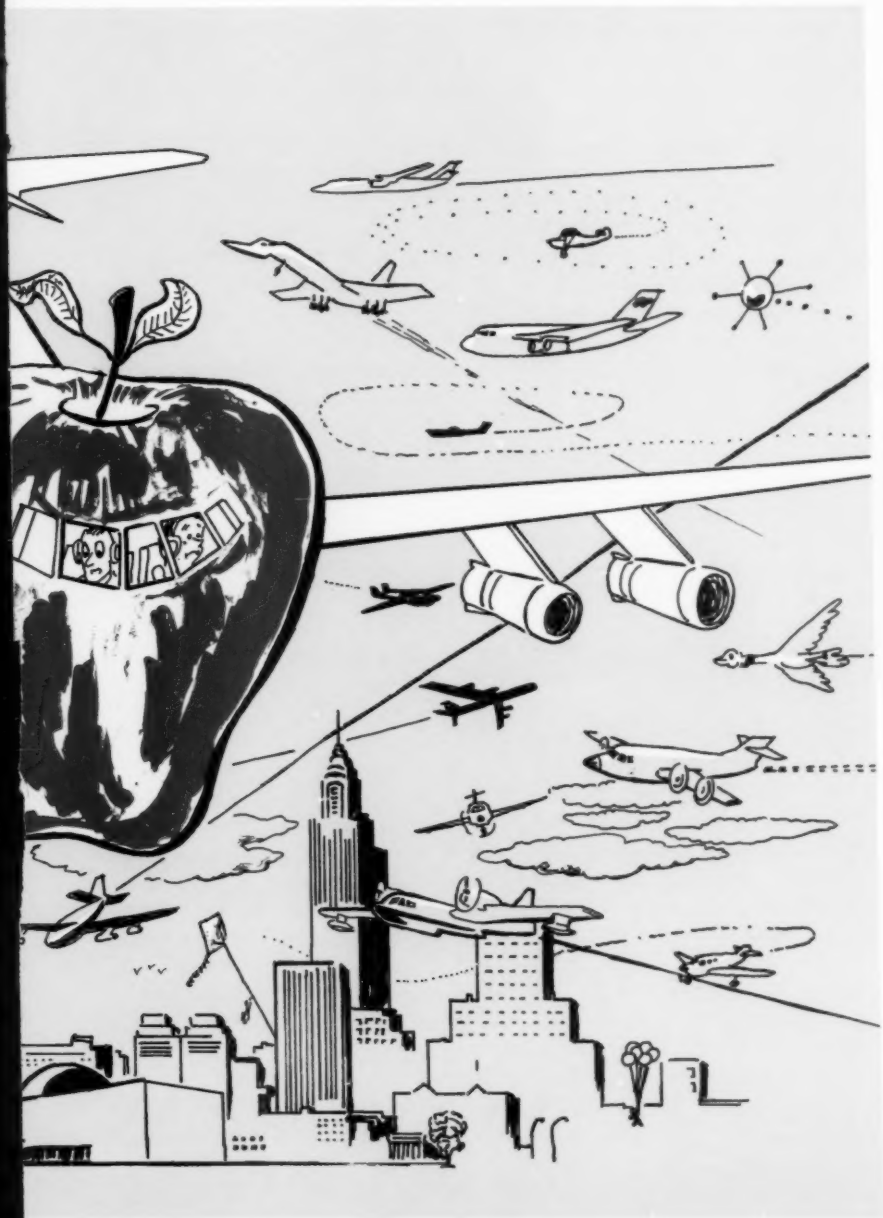
Lay Some Groundwork

Prior to departure, there is some groundwork to be laid. For example, JFK requires clearance prior to arrival there (similar to PPR). This clearance should be obtained by your command post, but it doesn't hurt to check that this has been done. It could save a lot of embarrassment. Notams should be checked regardless of your destination, but there could be a problem finding all of them unless you check a couple of the less obvious places like the Airmans' Information Manual (AIM), part 3A. Two sections in part 3A contain information for airports. The first is the notam section. The second is the Flight Data Center notam section which has important changes to approach procedures (somewhat like a continuing MAN). Although the "new" notam system is supposed to contain civil notams, in fact it doesn't always, so a phone call to the Flight Service Station to check notams and Special Notices to the notams is appropriate.



akes you feel like a duck in a shooting gallery, you're have to be that ominous.

e Big Apple



Before taking off, try to find out where you will be parking. Once you get to the field you may end up in the south forty if you're unable to inform ground control of your parking area. Try to get a Jeppesen approach chart for your destination because its airport diagrams are much larger than those on the DOD plates, and the taxiways are lettered on the diagram.

"Admit you're new and unfamiliar with the field, and be willing to concede that you're not the world's best pilot."

During flight planning, take a look at any STAR's (Standard Terminal Arrival Routes) that approximate your route of flight. Even though you may not file for one, you could be issued a STAR anyway. If you tell the controller you can't accept a STAR, he'll probably just read you the text of the STAR for your clearance. Look over approaches that you might expect into the airport. There are some approaches, such as the Expressway and River approaches at La Guardia and Canarsie (VOR 13 L/R) at JFK, that are basically visual approaches with some navaid use involved.

Tune ATIS Early

You can get ahead of the game by picking up the ATIS as early as possible but definitely before your initial handoff to approach control. Once center hands you off to ap-

proach, notify the approach controller upon initial contact that you have the latest ATIS. If you don't, he has to take time out to give you the information.

If the condition of the runway is other than good, you should receive a braking action report either from the ATIS or approach control. Find out what type of aircraft reported the braking action. A couple of years back, a 727 going into a 9,000-foot runway with a braking action of "fair" used the entire runway to stop. A slightly ragged captain inquired as to the source of the liberal report of "fair" and was told it was determined by the airport manager's VW with chains. *Caveat emptor.*

One of the most common methods of providing aircraft separation is airspeed restrictions. And unless you want to go to the end of the line, hold your assigned speed as closely as possible. Listen closely to approach control to determine who's in front of and behind you and how fast they're going. You might offer to adjust your own speed to fit the pattern. This always impresses controllers and they just might return the favor.

Visual Approaches

The most common instrument approach used by the air carriers is the *visual* approach. And since you're operating in air carrier country, expect to get more of the same. Visuals can save you time and gas by allowing you to deviate from a prescribed instrument approach and proceed to the airport visually—as long as VMC is maintained at all times. Approach control will provide radar separation. You may be cleared for the visual before you sight the airport as long as you have visual contact with an aircraft that does have the airport in sight. But be sure you have a tally on the right airport/aircraft before notifying approach that "we've got the American jet in sight." If you've sighted the wrong aircraft, you could end up at La Guardia when your destination is JFK.

Normal traffic pattern altitude during a visual approach is 1,500 feet AGL unless otherwise specified, and FAR 91.87 (which is binding on military pilots) requires pilots to maintain an altitude at or above either a glide slope (if the runway is served by ILS) or the VASI's.

When approach control is satisfied with your separation he will normally pass you over to the tower, which will assign a landing sequence. At civil fields there is no such thing as reduced runway separation (two aircraft on runway for landing) as there is at some Air Force fields; so expect to go around if the aircraft in front of you doesn't clear the runway in time. Once you land, try to clear the runway as soon as possible. You don't have to call tower before clearing, but you're expected to clear as soon as possible and switch to a ground frequency when directed by tower. If you've never been into the field before, let ground know, and then ask for progressive taxi instructions.

Several things to beware of when taxiing at civilian fields:

Civilians are not aware of MAC wingtip clearance criteria.

Civilian fields aren't equipped with "follow me" trucks.

While parking, there probably won't be a marshaller. If there is, his signals may be like nothing you've ever seen before.

Taxi speeds are much faster and spacing much closer than at military fields.

A lot of vehicles on the airfield are uncontrolled, so keep your eyes outside the cockpit.

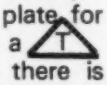
Civilians are not aware of Air Force or MAC regulations regarding vehicle operations near aircraft, requirements for wing walkers, etc., so it's up to you to either let them know or get your crew chief out there to supervise taxiing if you end up in close quarters. *Proximus crashious.*

Departure Planning

When the time comes to leave, take a look at your pro-

posed route, study all applicable SID's in the SID booklet, and pull out a low altitude chart. Take a minute to survey your destination area before calling clearance delivery. And be ready to copy your clearance as soon as you release the mike button. Quite often the readback will come without your call sign prefacing it. Sometimes, after you've called for clearance, delivery will read back clearances for three or four other aircraft. And then out of the blue, "MAC 50122 cleared Charleston, Freehold Seven Westminister transition, as filed, maintain eight, departure 134.2/3646." Some clearance delivery people sound like auctioneers, and if you're not on your toes, about the time you hear "3646" you've just set your box lunch down and gotten out your pencil.

You may also find that you've been issued a SID for which you didn't file. If you complain to clearance delivery about it, they may just read back the entire SID to you right out of the book. Be flexible.

A note of caution on civil SID's. Unlike military SID's, civil SID's never publish a climb block, and yet require a minimum climb gradient of 152 feet per nautical mile. There may be an accelerated climb rate or crossing restriction published in a civil SID. The main problem with this is that the limiting obstacle associated with that climb gradient may not be identified as it is in military SID's. Also, climb gradients specified in civil SID's do not include the 100 feet per nautical mile pad as does a DOD SID. *(Gluteus maximus scrapious.)* If the approach plate for your airport contains a  then this means that there is an obstruction off the runway that requires a climb gradient of *at least* 152 feet per nautical mile. Takeoff minimums in the front of the approach book may give you additional information concerning obstruction avoidance. You might even find some kind of a SID in the takeoff minimums section of the approach book.

You may or may not take off from the same runway on which you landed, so listen with a clear ear for your taxi instructions. The checklist should be completed before you reach the end of the runway since most tower controllers consider you ready for takeoff immediately upon reaching that point. It also upsets their flow pattern for aircraft behind you if you take too much time at the end of the runway. Civilian controllers tend to space traffic much closer than military controllers (although still within the limits specified in FAA handbooks), and you may be cleared for takeoff with an aircraft on three- or four-mile final.

Procedures Differ

Once cleared for takeoff, avoid the mistake of automatically switching to departure control. Many civil fields do not have a UHF guard transmitter, so stay with tower until directed to change to a departure control frequency.

Most busy civilian airports are located in or near residential areas where aircraft noise is a big issue. For this reason, a standard civilian climbout means the best climb to traffic pattern altitude (1,500 feet AGL) before cleanup (flaps, slats, etc.) to minimize noise—provided that it doesn't adversely affect safety of flight.

The most important thing to remember when going into one of the busy civil airports is to ask for help. Admit you're new and unfamiliar with the field, and be willing to concede that you're not the world's best pilot. You may find this kind of flying a very challenging and rewarding change of pace from flying across the pond.

Whatever else you do, don't forget that MAC requirements and regulations always apply to you. Regardless of what you may see to the contrary, good judgment should never be discarded for the sake of getting in the traffic pattern or being cleared for takeoff. You're still in charge and responsible for the safety of your crew and aircraft, so don't ever be pressured to do something you don't think you should.

Most MAC aircrew members have never undergone a serious physiological incident, and only a few have seen passengers experience problems that couldn't be cleared up with a few valsalvas or a decrease in the aircraft's rate of descent.

But a few months ago a crew en route from Europe to the United States had its hands full when not one, but two, passengers developed problems that kept its loadmasters busy for much of their flight.

Both passengers were women, which apparently had nothing to do with their problems except perhaps to add to the crew's concern.

The first incident began after six hours of flight as the Starlifter cruised at flight level 330 with a cabin altitude of 10,000 feet. After exhibiting symptoms of hypoxia, the woman lost consciousness and the loadmaster quickly administered 100

By the time the aircraft landed the crew had reason to feel as if they had undergone an in-flight physiological training course.

Physiological Merry-Go-Round

percent oxygen. She regained consciousness after approximately 15 minutes, but her problems weren't over. Five minutes later she again showed hypoxic symptoms. The loadmaster put her on oxygen again until she felt better. After that, he administered oxygen every five minutes for the remainder of the flight.

Due to the seriousness of the incident, the aircraft commander decided to divert into the nearest Air Force base, an hour and a half away, to obtain medical assistance.

The situation seemed under control as he began descending for the approach. As the aircraft neared 6,000 feet, a second passenger complained of a severe ear block. The AC leveled the aircraft at 6,000 feet. The ear block persisted, so the Starlifter entered a holding pattern.

The crew tried everything they knew to clear the ear block, including raising and lowering the cabin altitude. But the woman's pain continued. After an hour in the holding pattern, and with fuel running low, the aircraft commander requested approach clearance and landed.

An examination of the woman who had suffered apparent hypoxia showed that she had experienced no adverse side effects, but the investigation turned up several interesting facts. The first was that she had been very nervous about flying. The second was that she had not eaten all day. These factors caused her to hyperventilate and, subsequently, lose consciousness.

The passenger with the ear block was not so fortunate. Both of her eardrums were ruptured. An investigation into her in-flight dilemma also provided a cause-and-effect relationship. The woman, suffering from an upper respiratory infection prior to the flight, was unaware of the dangers involved while flying in such a condition.

Although crews have little control over passengers prior to their boarding an aircraft, the lessons in this incident apply to fliers and passengers alike. Aircrews are susceptible to the same physiological problems as their passengers. The major difference is that while passengers may not know what is happening to them, aircrews are trained to recognize their own symptoms—and those of others—and should know how to deal with them.

Officers investigating this incident recommended that when checking in for flights, passengers should be briefed on the hazards of flying with upper respiratory infections and the need for a balanced diet prior to flying. That's good information for anyone—including aircrews.

There's more to parachuting than just jumping out of an airplane. Here's one jumper who swears that happiness is . . .

A Pilot with a Small Foot

by Maj Melvin L. Parsons
OL-G, 435 TAW
Vicenza Airport, Italy

When you show up for an airdrop mission, do the Army jumpers seem to stare at your feet? Well, it's not your imagination; if you're a pilot they're looking at the size of your shoes. Paratroop folklore has it that the smaller a pilot's feet, the easier he is on the rudders; consequently, the smoother the ride and the better the jump. After five years on

jump status, I find myself doing the same thing.

I like a short pilot who can barely fill a size six shoe. Somehow, I know he won't be on the rudders while I'm trying to shuffle back to the paratroop door, keeping my static line free, and maintaining my balance—while dragging a heavy, bulky equipment bag.

Balancing Act

If you recall walking around in the cabin of an aircraft when it's a bit bumpy, you know how difficult it is to keep your balance. Add the multitude of distractions that a paratrooper must contend with and the difficulty index increases. But how important is making a good "clean" exit as opposed to "falling" out of the aircraft? It could be a matter of life or death.

Last summer I participated in an air assault in which an Army jumper made his *last* jump—unplanned. It was the first time that I had participated in a jump in which someone had been killed. Broken bones, yes—we almost expect that. But dying . . .

Investigators found that the fatal sequence began with a trooper stumbling and falling out of the aircraft—he appeared to lose his balance just as he got to the door. I jumped immediately behind him. It was a fairly rough day. Whether the pilot contributed anything whatsoever to the pitching and yawing of the aircraft, I don't know. But the point is, any pilot who is heavy on the rudders while the green light is on adds an unnecessary hazard to those already present. We'd rather walk that extra hundred yards on the ground than be picked up by the ambulance on DZ centerline.

Attitude Shift

I have accumulated several thousand flying hours in the cockpit of the C-141 and C-130. But since I began hooking up my static line in the back on those same aircraft, I've experienced an attitude shift. For you guys up front, I'll say it this way: Don't forget you've got real people in the back. Don't get me wrong; as a pilot, I love to shoot overhead patterns using 45 degrees of bank and turning off the runway at the 4,000-foot marker. But the first time I experienced this manuever as a jumper, I could have killed the pilot. Fortunately for both of us, by the time I determined that my equipment bag hadn't caused me a hernia and untangled myself from the other 59 jumpers, the pilot was in crew rest. Sometimes, a pilot has no control over a jumper's comfort, and this is readily accepted. But there are times when I wonder.

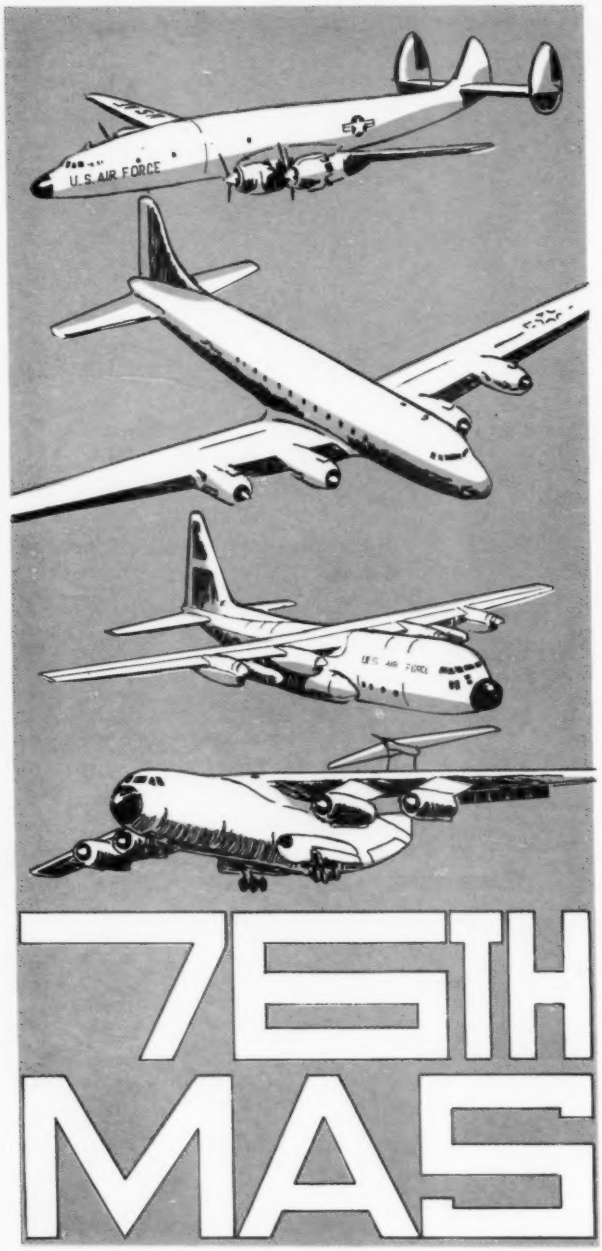
A Happy Hooker-upper

Paratroopers seldom talk about the aircrew who drops them—as long as they land safely on the DZ. But recently, after a long four-hour flight to the DZ, the jumpers completed their PLF's and began singing the praises of the aircrew. Why? The loadmaster had performed the simple act of passing out paper cups of water to the warm, keyed-up troopers during the flight. That's all. It was a new experience for them and they thought it was great.

It doesn't take much to please a paratrooper—just a pilot with small feet and the awareness that he's got real people back there. And perhaps a cup of cool water.

The 76th MAS stakes its claim to the title "Safest Squadron in the United States Air Force."

Challenge from Charleston



By the end of October 1976, the 76th Military Airlift Squadron, Charleston AFB, South Carolina, had amassed 642,359.7 accident-free hours—a squadron record not only for MAC, but as far as can be determined, for the entire Air Force. Neither minor nor major accident mars the history of the 76th.

Since activation on 20 July 1952, the 76th's unblemished performance spans the lifetimes of four aircraft. The first, C-54 Skymasters, flew from home station at Kelly AFB, Texas, to other stateside bases and occasionally overseas. Four years later the unit moved to Charleston AFB and transitioned to the new C-121 Constellation, flying missions mainly to Europe as part of MATS' Atlantic Division. In 1963 the unit again received new aircraft, this time the versatile C-130; and in 1967 the 76th received its first C-141A. Over the years squadron members have met the problems and perils of each new aircraft, united in a common goal: the continued safe execution of the unit's mission.

From routine embassy runs to the airlift of Marines for the rescue of the Mayaguez crew, safety has been a way of life with the 76th. For more than 24 years, the squadron's aircraft have carried sentry dogs and helicopters, evacuated seriously ill and injured persons, and flown relief supplies to countries suffering from the disasters of drought, flood, or hurricane. Some of its most precious cargoes have been refugees seeking asylum in the free world.

But no matter what the mission, the aircraft, or the hazards, the 76th Military Airlift Squadron has performed without an accident for more than 642,000 flying hours.

Do we hear any unit contesting the 76th's claim as the safest squadron in the Air Force?

Fearful of being placed on the "Fat Person" roster, a chubby C.R. devises his own weight reduction program.

The club was unusually crowded as the Aviator with Avoirdupois worked his way toward the bar, standing on tiptoe occasionally to get his bearings. Finally spotting an old friend, C.R. wedged his bulk into the adjacent space and bellowed an order for drinks.

On the stool next to C.R., Maj Al Adipose was obviously having an unhappy Happy Hour. He had acknowledged C.R.'s presence with a nod and was now staring glumly into his glass.

"Greetings, my long-faced friend," the Rotund One smiled. "Why all the gloom? You look like you've just gotten a seven-year assignment to the Pentagon."

"It's just about that bad, C.R.," the bulky major replied. "I just busted my flight physical—for overweight. They just plain laid it on me—I either lose . . . or leave."

C.R.'s chubby face registered shock. "Surely you jest!" he protested. "Why, good ol' Doc Broadbeam is one of us! He'd never—"

"He didn't," Adipose interrupted. "He's TDY for the next 60 days. It was that new guy, Captain Whippet. A real hardnose, that one."

"Whippet?" C.R. mused. "You mean the guy who had his picture in the base paper? The one who looks like a leather-covered stork? The one who runs around the perimeter road 12 times a day? *That* Whippet?"

"The very same. As far as I can tell, he doesn't eat, drink, or smoke. He just runs. How can you communicate with a madman like that?"

"Arggh," C.R. muttered. "And I'm due for my physical

in three weeks."

Major Adipose glanced at his friend's circumferential surplusage. "Looks like you'll be joining me on the Fat Person roster. Well, they say misery loves company."

"Never!" the Paunchus Pilot snorted. "I'll play their silly game; it's just a matter of willpower. I'll start a diet—" he reached for a fistful of potato chips—"first thing in the morning."

•

Long Suffering Sam glanced sympathetically at his Bulgy Boss as the Sabreliner cruised smoothly at FL 330. It was the fifth day of C.R.'s weight-reduction campaign and his fifth consecutive hangover.

"Boss, I don't think that Drinking Man's Diet is doing you much good. Are you sure you *have* to drink while you're on the diet?"

"Blast it, Sammy," C.R. winced, "quit yelling. I can hear you. No, I don't *have* to drink, but when my head hurts like this, I can nearly ignore the hunger pangs. Besides, it's the club's fault that I'm not losing weight—how can they expect a man to resist Swedish meatballs and clam dip? There oughta be a law."

"Maybe you'd better just stay away from the club, Sir," Sammy advised. "Those snacks are pretty hard to turn down."

"M'boy, I believe you're right," C.R. concurred. "Better than that, I think it's time for a whole new approach." He sorted through a stack of paperback diet books. "Let's see, now . . . *Slenderize with Zen* . . . *The Macrobiotic Mayonnaise Diet* . . . *Doctor Max Proffit's Instant Easy Eat-Off-Your-Weight Diet* . . . "

Sammy sighed, but said nothing. He wasn't looking forward to the next two weeks.

•

The Master Manipulator looked haggard as he climbed aboard the airplane. There were just four days left before his physical; his girth had diminished slightly, but obviously had a long way to go. Sammy sniffed the air gingerly as C.R. entered the cockpit. Then he breathed a sigh of relief; the Great One had apparently abandoned his garlic-and-limburger diet.

"Hi, Boss. How's the new diet going?"

"Pfaugh!" C.R. spat. "I've given it up, m'boy; it was hopeless. No, Sammy, I've finally found the answer. I'll be sleek as a seal by the time I climb onto those scales."

"How's that, Sir?" Sam inquired.

"Simple, m'boy. Since eating appears to be the cause of my problem, I've decided to quit. Neither drop nor morsel shall pass my lips for the next four days; and with a few sauna baths to eliminate excess body water, I'll be slim as a wand by Friday."

"Gee, Boss, I don't know," Sammy frowned. "That's pretty drastic. Have you checked with the flight surgeon about it?"

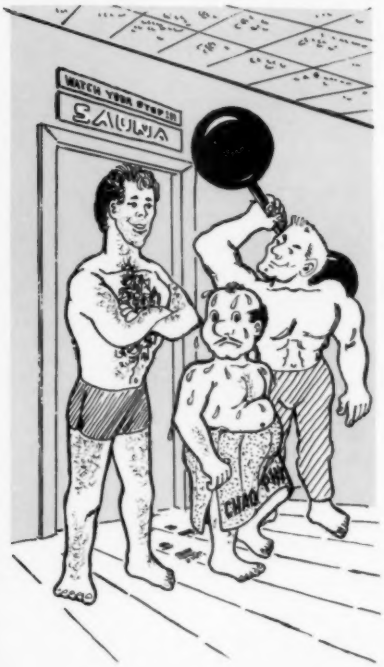
"Are you kidding?" C.R. queried scornfully. "That stretch-model sawbones would have me running up and down the side of the headquarters building six hours a day and living on carrot sticks and sauerkraut juice. No, Sammy, I can handle this myself. By Friday, you'll see a new C.R. Terror. Starting-engines checklist!"

•

As the days went by, C.R. found his self-imposed regimen easier to handle than he had expected. He had already chained his refrigerator shut and mailed the key to his uncle in Iowa with instructions to return it in a week. He avoided the snack machines of the administrative airlift circuit by the simple expedient of staying in the airplane at every stop while Sammy went in to check weather and notams.

But C.R.'s plan was prov-

ing successful; the pounds were definitely coming off. The sauna part of the program had, surprisingly, proved the most difficult. The Ace of Aerospace had found that most of the sauna parlors in the local yellow pages were not as they seemed; in fact, the proprietress of the Fickle Finger Health Spa had actually burst into gales of laughter when C.R. told her what he was looking for. He had finally solved his problem by signing up for a temporary (and expensive) membership at the Golden Biceps Gym and Body-Building Club. He endured with pained resignation the snickers of the lean and muscular membership as he trotted to and from the sauna room each evening,



tastefully attired in a towel with "Chao Phya Hotel" lettered on it in blue.

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But the end of the ordeal was in sight. As a thoroughly weakened C.R. staggered through the door of the flight surgeon's office on Friday morning, his knees seemed to bend in both directions, and he had considerable difficulty focusing his eyes because of a splitting headache.

It wasn't long before he heard his name called for the weigh-in. Shaky but confident, he stepped onto the scale.

"Okay, Sir, you're within limits; you can step down," intoned the white-coated sergeant. A broad grin suffused the Dynamic Dieter's face. He stepped off the scale, heaved a huge sigh of relief—and fainted dead away.

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"Boss, I hate to say I told you so," Sammy chided gently.

C.R. grinned weakly from the hospital bed. "Nonsense, Sammy, I'm fit as two fiddles. They're just keeping me here for a day so the nurses can get some practice and Whippet can give me another lecture about the importance of dieting properly. But the important thing is, I made it—I'm safe from the Fat Boy program for another year."

Sammy shook his head and began to say something, but just then the door opened and a civilian carrying a large, flat, white box entered.

"Major Terror?" he asked.

"Yes, indeed, my good man," C.R. grinned. "Just put it right here." He patted the bed next to his diminished paunch.

"Boss, what in the world—" Sam began, but stopped as a distinctive aroma caught his attention.

"There you are, my man, and bless you." C.R. handed the civilian a five-dollar bill. "Keep the change." He opened the box, and his eyes twinkled as he looked up at Sam.

"Care to join me, Sammy?" he invited. "After all, a little pepperoni, sausage, mushroom, enchilada, and chicken-liver pizza never hurt anybody."

Quick Stoppers

Those Little O-Rings

O-rings which were designed for water or pneumatic lines were mistakenly installed in the fuel lines of a T-39 and caused an engine to get all hot and bothered. The fire warning light illuminated as the engine was being run up, so it was shut down. Investigators found a large discolored bulge and an eight-inch tear in the combustion chamber case. Six of the eight O-ring seals installed at both ends of the four tubes that transfer fuel into the fuel manifold were not the correct type. And that wasn't all that was wrong. An unauthorized rubber sealant had been used between the diffuser case and a valve in the system. The sealant eliminated the visible detection of the leak by stopping it externally but not internally.

Since no record could be found documenting installation of the seals, investigators believe maintenance had been performed by unqualified personnel without entering it into the AF Form 781A.

Thanks to Lt Col Gerald F. Elsbernd and Capt Samuel R. Vaughan
Det 1, 1402 MAS
Langley AFB, Virginia

A Voice from Nowhere

An HH-53 hovering over a simulated survivor was making a pickup when the radar altimeter began fluctuating and broke lock. The chopper began oscillating with the "survivor" swinging precariously on the forest penetrator, banging against the surrounding trees. As the oscillation continued, the hoist operator lost sight of the frantic "survivor" who was by now somewhere between the ground and the treetops. Suddenly, the aircraft commander heard a transmission that the "survivor" was on the ground. So, in order to keep from dragging him along the ground and through the trees, he ordered the hoist cable cut. The cable was cut but, unfortunately for the "survivor," at the time he was still dangling off the ground. He reportedly fell an "unspecified" distance to the ground, still riding the penetrator. No one knows who transmitted the information that the "survivor" was on the ground—or if they do, they're not talking. The "survivor" suffered no serious injuries.

Murphy Wins Again

Passengers on the C-141 were just getting settled down after takeoff when suddenly they found themselves dripping with a red liquid which someone told them was hydraulic fluid. That's what it was, all right. Number two hydraulic system reservoir had just failed and they had become victims—of sorts. The Starlifter AC declared an emergency and landed the aircraft. The flight surgeons pronounced the passengers okay and maintenance soon found out what had caused the problem. And no one thought it was funny. A check valve in the number two hydraulic system had been installed backwards, causing an overpressure in the reservoir and subsequent failure. As has been the case in several incidents in the past few months, maintenance records revealed no indication of work performed on the system within the past 90 days.

No Fair Peeking

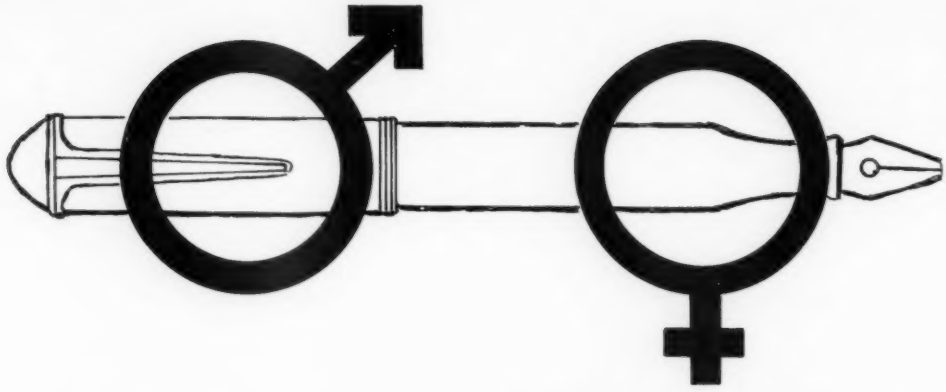
An unsafe indication on the right main gear got the attention of a C-135 crew preparing for a full-stop landing. Following Dash One procedures, they attempted to scan the gear through the inspection window but found that the window had been taped over on the wheel well side.

With the concurrence of the command post, they decided to smash the window. This proved to be more difficult than expected; in order to reach the window, the crew had to remove the inspection door and part of the adjacent panel with a crash axe. Finally they saw that the gear was down and locked, and the aircraft landed without further incident.

Maintenance records showed that the aircraft had been in corrosion control just prior to the flight. The window had been taped over by a corrosion control specialist, who then signed off his work without removing the tape. The crew chief also failed to check the window during his preflight.

It Takes Two To Tango

It takes two to tango but, under some circumstances, it takes more than two engines to taxi a C-141, as a former MAC aircraft commander found out recently. After landing to offload passengers, numbers one and four engines were shut down. Then, to allow a VIP to deplane, number four was restarted and number two shut down. As the pilot prepared to restart number two, tower advised that the apron on which the aircraft was parked was not stressed for a C-141. With both engines shut down on the left side, the AC released the brakes for immediate taxi. The plane rolled forward with the nose gear turning to the left due to asymmetrical power. The plane was stopped and number two was restarted to straighten out the gear, but nothing doing. The nose gear couldn't be straightened out, so the Starlifter was shut down.



Calling All Women

THE MAC FLYER is challenging women to enter the 1977 MAC Flying Safety Writing Contest.

That's right. Male chauvinism is dead and by unanimous acclaim, staffers have agreed to go all out to seek participation from the thousands of women who have access to the magazine and may desire to have their say.

Women have never been excluded from entering the contest, but because the magazine is directed primarily toward fliers, most of whom are males, they may have felt reluctant to participate. In short, the editors believe that within reach is an overlooked reservoir of talented women who should be encouraged to contribute to the safety effort.

Women have long been a part of the aviation fraternity and are beginning to join the ranks of military pilots. Women pilots are natural candidates for the contest, but aren't the only ones being targeted as contest participants.

Safety is everyone's business, and Air Force wives probably are among the most safety-conscious individuals in the Air Force community. Person for person, their literary talent is likely to equal, and may even exceed, that of their husbands. Women serving in the Air Force are another literary resource that should manifest itself in the pages of this magazine.

No, THE MAC FLYER is not playing down the talents of its male readers. But a good article is just that, regardless of the author's gender. So you guys, let your wives, girl friends and female relatives in on the challenge. Everyone in MAC will benefit from their efforts. A point to remember is that co-authored stories are also acceptable.

For the benefit of those who are not familiar with the contest rules, here they are:

- Anyone can enter. To win one of the official prizes (desk set or wall plaque), you must be assigned to MAC, active or reserve, and be either military or a Department of the Air Force civilian. But whether or not you have any connection with the Air Force, if your article wins, it will be published.

- Try to keep your entry between 1,000 and 3,000 words (about six to 14 typewritten, double-spaced pages—this is a guideline. Shorter articles will be accepted.) and be sure it's unpublished, original and flying oriented. Its subject doesn't have to be strictly flying, but must in some way be related to aviation. Entries must be postmarked by 31 March 1977. Send to:

The MAC Flying Safety Writing Contest
MAC/IGFE
Scott AFB, IL 62225

after deadline . . . .

T-39 FUEL CAP HAZARD -- The new wing fuel caps now being installed on USAF Sabreliners are not equipped with a check valve to prevent fuel spills. Opening one of these caps while fuel is in the fuselage tank will result in fuel gushing out of the opening. In addition to the obvious fire hazard, there is a high risk of chemical burns if fuel remains on skin or clothing for more than a few minutes.

A NEW PIREP FORMAT standardizes the sequence in which weather elements reported by pilots are transmitted to weather stations and forecast units in the United States. The new format is published in the PIREP section of the IFR Supplement. The only significant change from the pilot's viewpoint is the requirement to locate observed weather elements with reference to navigational aids such as VOR or tacan.

REFUELING HAZARD -- A recent static-electricity-induced fuel tank fire in another command serves as a reminder that refueling can be dangerous. At ambient temperatures of 20° to 40°F when the humidity is low, jet fuel is highly susceptible to electrostatic ignition. When refueling helicopters under these conditions, particular cautions should be taken: Use ramp grounding points, keep the nozzle in good metal-to-metal contact with the filler opening, insert the nozzle into the hole in the fuel tank fire suppressant foam, and use the minimum flow rate from the refueling truck. Everyone, except the nozzle operator, should remain clear of the filler opening.

TERRORIFIC T-SHIRTS -- Persons entering the 1977 MAC Flying Safety Writing Contest are in for a real treat. For the first time, C. R. Terror T-shirts will be presented to those who send entries that comply with contest rules. The shirts are now in the production stage. More on this next month.

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Touch 'n Go

" SIRE, WE CAUGHT THIS GUY TRYIN' TO COME THROUGH THE GATE WITHOUT AN I. D. CARD."